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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,058	03/30/2001	Tatsuya Suzuki	NECZ 18.544	8996

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KATTEN MUCHIN ZAVIS ROSENMAN
575 MADISON AVENUE
NEW YORK, NY 10022-2585

EXAMINER

MOORE, KARLA A

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 12/26/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,058

Applicant(s)

SUZUKI, TATSUYA

Examiner

Karla Moore

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/13/02.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7,12,13 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 and 15 is/are allowed.
- 6) ☒ Claim(s) 1-3,6-7, 12-13 and 16-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 6-7, 10, 12-13 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 5,346,518 to Baseman et al., in view of U.S. Patent No. 5,772,738 to Muraoka.
3. Baseman et al. disclose the invention substantially as claimed and comprising: a semiconductor substrate/stock vessel (40, Figure 6A), which is an openable/closeable (column 16, rows 39-42) vessel used in a semiconductor device manufacturing process and adapted to store or transfer a semiconductor substrate (12) (abstract), wherein said vessel incorporates at least one adsorbent made of active carbon and capable of adsorbing and organic substance, and is mounted detachably (30; column 8, rows 5-7 and 43-45; column 19, rows 44-46). The vessel incorporates a semiconductor substrate carrier (48) having a plurality of slots (52), each capable of holding one semiconductor substrate, so that a plurality of semiconductor substrates are stored while being held by said semiconductor carrier.
4. Baseman et al. further teach that the adsorbent is a silicon wafer with a surface coated with an adsorbing agent, such as active carbon (Figure 4, column 9, rows 41-46).
5. In addition to being mounted in an empty slot of said semiconductor substrate carrier, the adsorbent of Basemen et al. may also be mounted in a space defined between an inner wall of said stock/transfer vessel and an outer wall of said semiconductor substrate carrier.
6. With respect to claim 10, 12-13 and 16-17, Baseman et al. teach that the above described apparatus may be used in a method of manufacturing a semiconductor device wherein a semiconductor substrate is stored in the stock/transfer vessel incorporating at least one adsorbent capable of adsorbing an organic substance during an operation wait time between respective steps of manufacturing said semiconductor device, said adsorbent being mounted detachably (abstract).

7. However, Baseman et al. fail to teach said adsorbent is at least one of an ion-exchange resin and a material with a surface having an Si-F bond.
8. Muraoka teach the use of an air filter module containing an ion exchange resin absorber for the purpose of removing chemical contaminants from the air (column 1, rows 17-25).
9. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided an adsorber/absorber made of an ion exchange resin in Baseman et al. in order to remove chemical contaminants from air as taught by Muraoka.

Claim Rejections - 35 USC § 103

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baseman et al and Muraoka as applied to claims 1-3, 6-7, 10, 12-13 and 16-17, further in view of U.S. Patent No. 6,093,947 to Hanafi et al.
11. Baseman et al. and Muraoka disclose the invention substantially as claimed and as described above.
12. However, the prior art fails to teach a method of manufacturing a substrate, wherein the steps of manufacturing said semiconductor device include the step of forming a gate oxide film, the step of forming a polysilicon film and the step of forming a contact hole.
13. Hanafi et al. teach a process for manufacturing a semiconductor wafer, wherein the steps include forming a gate oxide film, forming a polysilicon film and forming a contact hole (column 2, rows 30-45). Hanafi et al. further teach that care should be taken not to introduce contaminants onto the film by transferring in a vacuum or an inert vacuum.
14. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have used the vessel of the prior art in a manufacturing process, which includes the steps of forming a gate oxide film, a polysilicon film and a contact hole, in order to prevent contamination as taught by Hanafi et al.

Response to Arguments

15. Applicant's arguments with respect to claims 1-3, 6-7, 10-13 and 16-17 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

16. Claims 5 and 15 are allowed.

17. The following is an examiner's statement of reasons for allowance:

The prior art fails to teach or fairly suggest the inventions of claims 5 and 15 wherein the adsorbent is a silicon wafer with a surface having a Si-F bond.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 703.305.3142. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on 703.308.1633. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9310 for regular communications and 703.872.9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.0661.

km
December 20, 2002


GREGORY MILLS
Supervisor
Telephone: 703.308.1633